VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the reissuance of the VPDES permit listed below. This permit is being processed as a Minor, Municipal permit. The effluent limitations contained in this permit will maintain the Water Quality Standards (WQS) of 9VAC25-260. The discharge results from the operation of a sewage treatment plant (SIC Code: 4952 - Sewerage Systems) at a retail fueling facility (SIC Code 5541 – Gasoline Service Station). This permit action consists of reissuing the permit with revisions to the permit, as needed, due to changes in applicable laws, guidance, and available technical information.

1. Facility Name and Address:
   Mauzy Liberty STP
   PO Box 8
   Mount Jackson, VA 22842
   Location: 10935 North Valley Pike, Broadway, Virginia 22815

2. Permit No. VA0090794; Expiration Date: October 31, 2015

3. Owner: Mauzy Liberty, LLC
   Contact Name: Mike Baker
   Title: Environmental Manager
   Telephone No: (540) 477-3131
   Email: mbaker@holtzmancorp.com

4. Description of Treatment Works Treating Domestic Sewage: **Appendix A**
   Total Number of Outfalls: 2

   The Mauzy Liberty STP receives sewage wastewater from a convenience store and restaurant facilities to patrons 24 hours a day.

   Average Discharge Flow (April 2012 – June 2015) = 0.002 MGD
   Design Average Flow = 0.006 MGD

5. Application Complete Date: August 3, 2015

   Permit Writer: Bev Carver Date: August 3, 2015
   Reviewed By: Dawn Jeffries Date: August 5, 2015

   Public Comment Period: _____ to _____

6. Receiving Stream Name: Smith Creek
   River Mile: 23.18
   Use Impairment: Yes
   Special Standards: pH, PWS
   Tidal Waters: No
   Watershed Name: VAV – B47R Smith Creek
   Basin: Potomac; Subbasin: Shenandoah
   Section: 6e; Class: IV

7. Operator License Requirements per 9VAC25-31-200.C: None

8. Reliability Class per 9VAC25-790: Class II (assigned April 8, 2002)

9. Permit Characterization:

☐ Private ☐ Federal ☐ State ☐ POTW ☑ PVOTW
☐ Possible Interstate Effect ☐ Interim Limits in Other Document (attach copy of CSO)

The permit characterization was changed from "private" to "PVOTW". The VPDES Permit Regulation defines Privately Owned Treatment Works (PVOTW) as a facility that receives wastewater from other facilities not owned by the permittee and is not a Publicly Owned Treatment Works (POTW). The Mauzy Liberty STP is not publicly owned but does receive wastewater from the Burger King restaurant which is not owned by the permittee.

10. Discharge Location Description and Receiving Waters Information: **Appendix B**

11. Antidegradation (AD) Review & Comments per 9VAC25-260-30:
Tier Designation: Tier 1

The State Water Control Board's WQS include an AD policy. All state surface waters are provided one of three levels of AD protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 waters have water quality that is better than the WQS. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 waters are exceptional waters and are so designated by regulatory amendment. The AD policy prohibits new or expanded discharges into exceptional waters.

The AD review begins with a Tier determination. Smith Creek in the immediate vicinity of the discharge is determined to be Tier 1 water because the stream does not meet the General Standard (Benthics) for aquatic life use. AD baselines are not calculated for Tier 1 waters.

12. Site Inspection: Performed by Bev Carver on July 22, 2015

13. Effluent Screening and Effluent Limitations: **Appendix C**

14. Effluent toxicity testing requirements included per 9VAC25-31-220.D: ☐Yes ☑ No

This is a municipal facility with a design flow < 1.0 MGD, no Significant Industrial Users (SIUs) or Categorical Industrial Users (CIUs), and is not deemed to have the potential to cause or contribute to instream toxicity.

15. Sewage sludge utilization and disposal options include the following:

Sewage sludge from the Mauzy Liberty STP is pumped and hauled to the North River WWTF in Mount Crawford for blending and further treatment.

The VPDES Permit application serves as the Sludge Management Plan and is approved with the reissuance of the permit.

16. Bases for Special Conditions: **Appendix D**

17. Material Storage per 9VAC25-31-280.B.2: This permit requires that the facility's O&M Manual include information to address the management of wastes, fluids, and pollutants which may be present at the facility, to avoid unauthorized discharge of such materials.

18. Antibacksliding Review per 9VAC25-31-220.L: This permit complies with the antibacksliding provisions of the VPDES Permit Regulation.

19. Impaired Use Status Evaluation per 9VAC25-31-220.D: Smith Creek in the vicinity of the discharge is listed as not meeting the General Standard for aquatic life use due to a documented benthic impairment. This section of stream is also listed as having elevated levels of coliform bacteria. A TMDL addressing these impairments includes the following WLAs for this discharge:

    E. coli: 1.04×10^{10} cfu/yr (based on a design flow of 0.006 MGD and a monthly average concentration of 126 cfu/100 mL)

    Sediment: Table 3.15 of the Smith Creek TMDL specifies the following WLAs for Mauzy Liberty:

    - TSS load of 820.8 lbs/yr
    - TSS concentration of 45 mg/L

    The Sediment TMDL is based on a design flow of 0.006 MGD.

20. Regulation of Users per 9VAC25-31-280.B.9: This facility is a Privately Owned Treatment Works (PVOTW); therefore, it is the responsibility of the PVOTW to control the industrial users contributing to the treatment works. The Mauzy Liberty STP receives wastewater from a Burger King restaurant which is not owned by the permittee.

21. Stormwater Management per 9VAC25-31-120: Application Required? ☐ Yes ☑ No

    This facility's SIC Code and activities do not fall within the categories for which a Stormwater Application submittal is required; however, the permittee voluntarily accepted stormwater management requirements when the permit was issued in 2002. The stormwater management requirements have been carried forward at this reissuance.

22. Compliance Schedule per 9VAC25-31-250: There are no compliance schedules included in the reissued permit.

23. Variances/Alternative Limits or Conditions per 9VAC25-31-280.B, 100.K, and 100.N: None

24. Financial Assurance Applicability per 9VAC25-650-10: N/A – This facility does not serve any permanent residences.

25. Virginia Environmental Excellence Program (VEEP) Evaluation per § 10.1-1187.1-7: At the time of this reissuance, is this facility considered by DEQ to be a participant in the Virginia Environmental Excellence Program in good standing at either the Exemplary Environmental Enterprise (E3) level or the Extraordinary Environmental Enterprise (E4) level? ☐ Yes ☑ No

26. Nutrient Trading Regulation per 9VAC25-820: See Appendix B
    General Permit Required: ☐ Yes ☑ No

    This facility is not required to maintain coverage under the General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen (TN) and Total Phosphorus (TP) Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia (9VAC25-820) because it is not listed with a WLA in the Registration List in 9 VAC 25-820-70; nor does the permit authorize expansion to 0.040 MGD or more (or an equivalent industrial load) that is subject to an offset or technology-based requirement; nor it is a new treatment works permitted to discharge more than 1,000 gpd and less than 39,999 gpd and had not commenced the discharge prior to January 1, 2011.

27. Nutrient monitoring included per Guidance Memo No. 14-2011: ☑ Yes ☐ No

    This facility is a Nonsignificant Discharger (all facilities not classified as Significant Dischargers as defined in the Nutrient Trading Watershed General Permit Regulation 9 VAC 25-820). Effluent sampling for TN and TP has not previously been completed and therefore has been included in the permit. This permit does not include any outfalls that discharge solely stormwater exposed to industrial activity.

28. Threatened and Endangered (T&E) Species Screening per 9VAC25-260-20 B.8: Because this is not an issuance or reissuance that allows increased discharge flows, T&E screening is not automatically required. However, in accordance with the VPDES Memorandum of Understanding, T&E screening was coordinated on May 13, 2014 through DGIF based upon request. Comments were received from DGIF on June 24, 2014 and are included in the permit processing file. Comments were considered in the drafting of the permit and were also forwarded to the permittee.

29. Public Notice Information per 9VAC25-31-280.B: All pertinent information is on file, and may be inspected and copied by contacting Bev Carver at: DEQ-Valley Regional Office, P.O. Box 3000, Harrisonburg, Virginia 22801, Telephone No. (540) 574-7805, Beverley.carver@deq.virginia.gov.

    Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

30. Historical Record:

    a. VPDES Permit No. VA0090794 was originally issued on April 8, 2002 and expired on April 8, 2007. The design flow was 0.006 MGD.
    Owner: Holtzman Family L.P.; Facility Name: Holtzman Express – Mauzy

    b. Plans and specifications for a new STP with a design flow of 0.006 MGD were approved by VDH on February 11, 2003.

    c. The Certificate to Operate (CTO) for the original STP (rotating Bio Wheel) was issued on August 13, 2004.

    d. The permit was reissued on April 9, 2007 and expired on March 31, 2012.
    Owner: Holtzman Family L.P.; Facility Name: Holtzman Express – Mauzy

    e. The permit was modified on February 22, 2008 to change the facility name.
    Owner: Holtzman Family L.P.; Facility Name: Mauzy Liberty

    f. In June 2010 the permittee was contacted by DEQ regarding an early reissuance of the permit due to DEQ workload issues.

    g. On August 16, 2010 an application was received for early reissuance of the permit.

h. A Certificate to Construct (CTC) was approved on September 2, 2010. It was determined that the existing Bio Wheel was a labor intensive system. The Bio Wheel was replaced with a new Aquarobics System. The design flow remained 0.006 MGD.

i. The CTO was issued on November 1, 2010.

j. On December 6, 2010, the permittee switched from chlorine disinfection to UV disinfection. A CTO for the UV disinfection system was issued on December 10, 2010.

k. On December 14, 2010, a letter was received from William B. Holtzman, President, stating that the station would no longer use a pressure wash around the petroleum dispensers. The permittee would switch to a dry clean method at the dispenser area and terminate the use of processed water and pressure washer cleaning.

l. On May 12, 2011, a Notice of Violation was issued to the permittee for BOD_5, TSS and E. coli effluent limitation violations between March 2011 and June 2011. These violations were attributed to start-up problems with the new Aquarobic Maxi Plant which began operating November 1, 2010 replacing the original Bio wheel system.

m. A Letter of Agreement dated April 2, 2012 was submitted by the permittee identifying activities necessary to bring the WWTP into long term permit compliance.

n. The O&M Manual for the new Aquarobic maxi-Plant was approved on September 1, 2011.

o. The permit was processed for early reissuance. The final permit was signed on May 20, 2011. The effective date of the permit was April 1, 2012. The expiration date is October 31, 2015. Owner: Holtzman Family, L.P. Facility Name: Mauzy Liberty

p. The enforcement case was closed on October 3, 2013. The permittee took the following corrective actions to achieve consistent compliance with the permit:

   - Made piping changes between the recirculation and UV system.
   - Additional UV bulbs were installed.
   - Additional media changes/replacements in the recirculation chamber were completed.

q. In an email dated May 27, 2015, the permittee indicated that the owner of the VPDES permit should be Mauzy Liberty LLC which is currently listed with the State Corporate Commission. The permitee also agreed to change the facility name from Mauzy Liberty to Mauzy Liberty STP. These changes will be reflected in the permit reissuance on November 1, 2015.

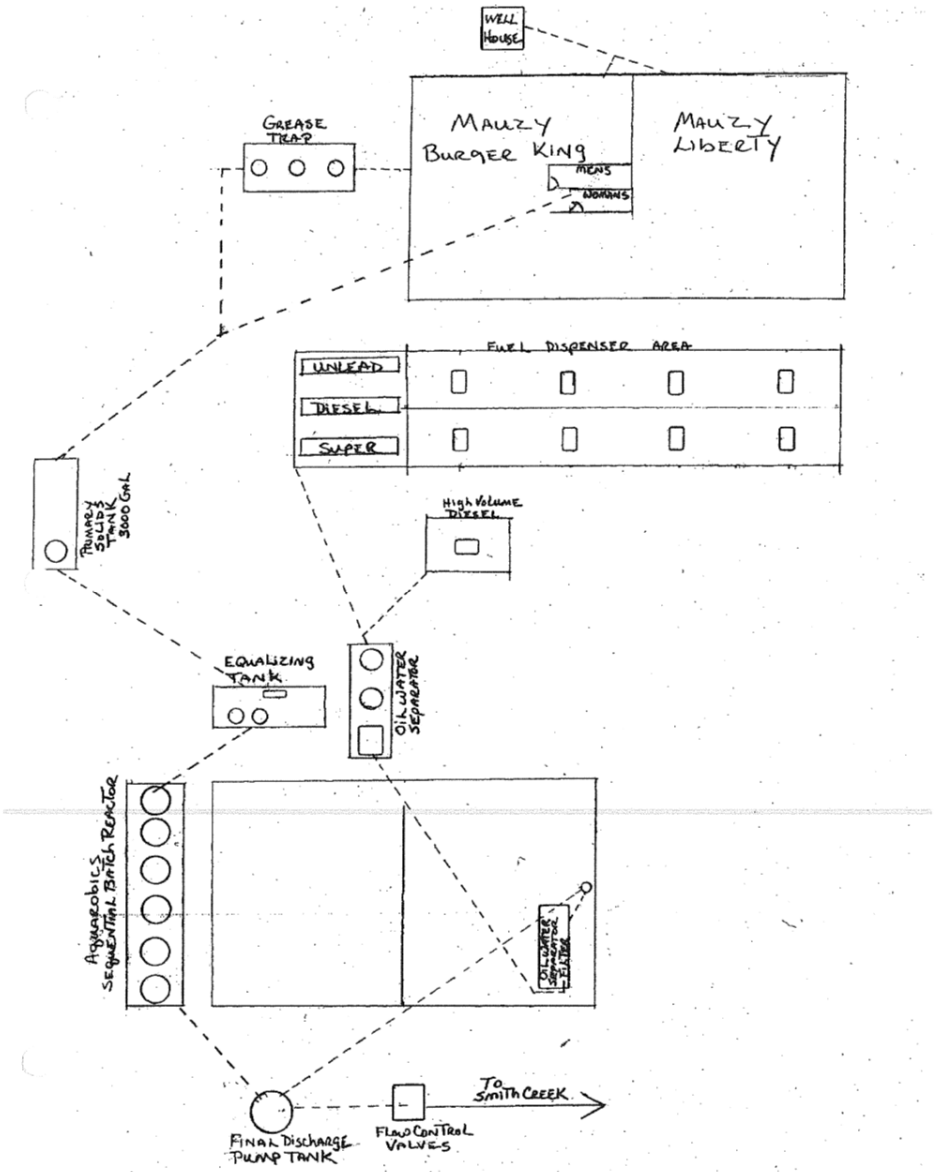
APPENDIX A

DESCRIPTION OF TREATMENT WORKS

Nature of Business:

Mauzy Liberty, LLC operates a retail fueling facility located in Rockingham County adjacent to Interstate 81 at the Broadway/Mauzy exit 257. The facility rests on a 4.17 acre lot and provides fuel, convenience store and restaurant facilities to patrons 24 hours a day.

Site Layout:



Description of Oil Water Separator (OWS)
A trench drain around the fuel islands directs incidental stormwater and spills to an onsite oil water separator followed by and oil water separator filter. Water from the oil water separator filter is directed to the Final Discharge Pump Tank.

The discharge from the OWS was previously permitted as Outfall 102 in the 2007 permit because the permittee previously pressure washed the petroleum dispenser once a month. The wash water was directed to the OWS. The facility now uses a dry cleaning method and no longer generates process wastewater going to Outfall 102. Since the OWS now only discharges incidental stormwater, the discharge from the oil water separator does not require limits or monitoring requirements; therefore, in the 2012 permit, Outfall 102 monitoring was removed.

Description of Sewage Treatment Plant:
Sanitary wastewater from the convenience store and restaurant is treated at an onsite sewage treatment plant.

Sewage treatment consists of a grease trap, screening/communition, equalization, sequential batch reactor, secondary clarifier, filtration and UV disinfection.

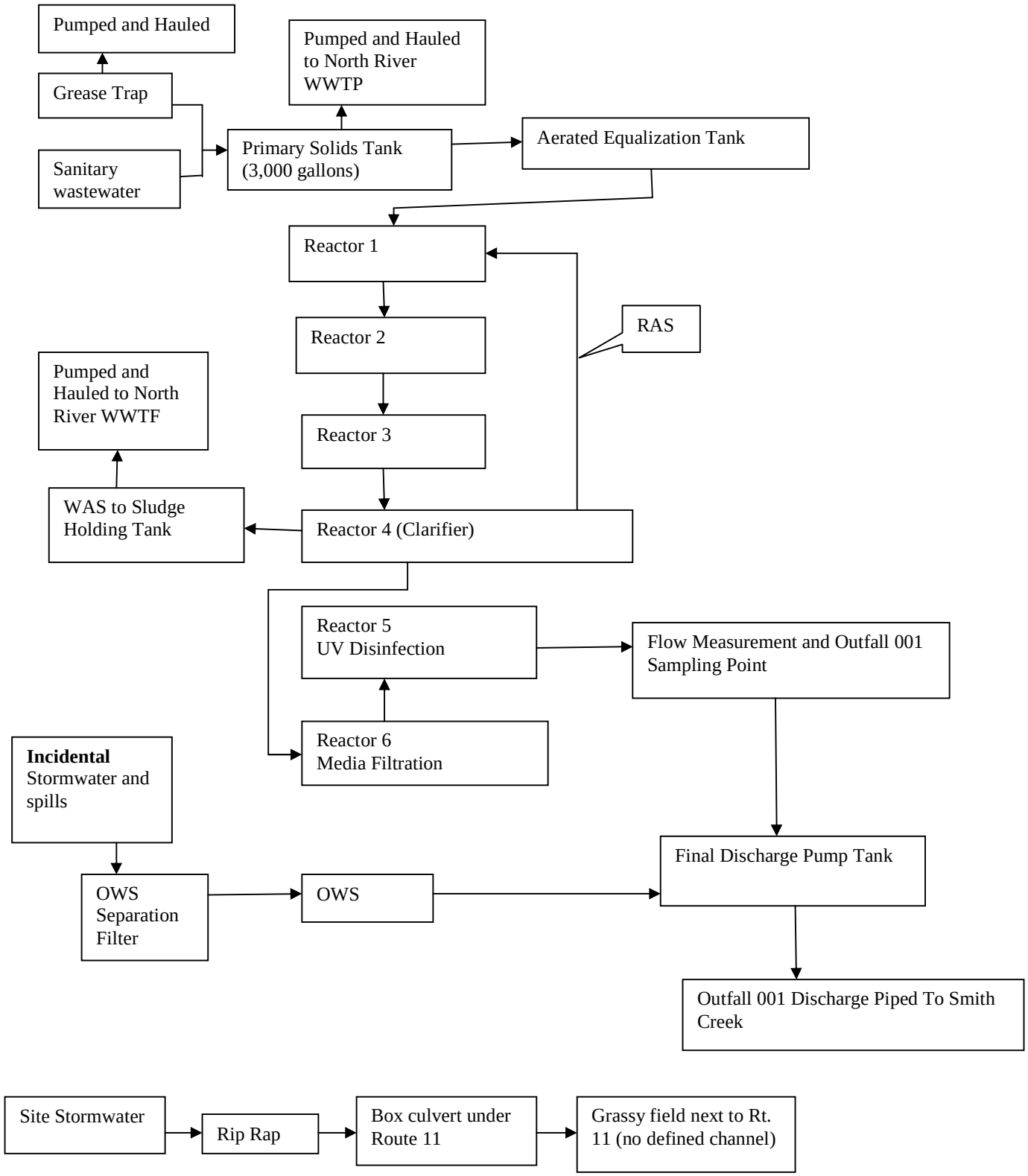
Sludge treatment consists of aerobic digestion. Settled solids in the aerobic digester and wastewater from the primary solids tank are periodically hauled to the North River WWTF for further treatment. Grease trap wastes are hauled to Valley Proteins.

The discharge from the STP was previously labeled as Outfall 101 in the 2007 permit to distinguish it from Outfall 102 for the OWS. In the 2012 permit, Outfall 102 was removed and the STP outfall was renamed from Outfall 101 to 001.

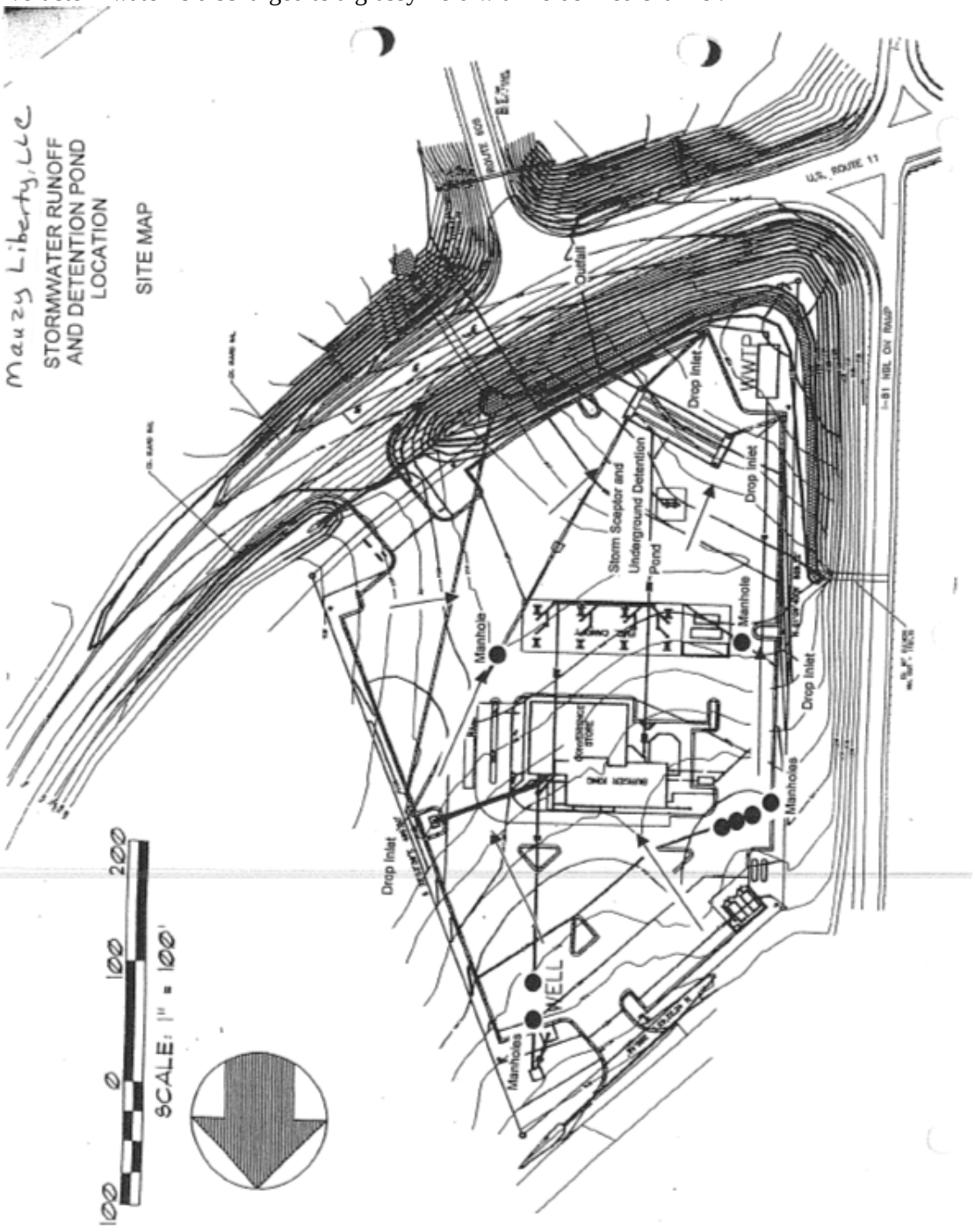
Outfall 001 Sampling Location:
The discharge from the sewage treatment plant is monitored and flow is recorded after UV disinfection prior to discharge to the Final Discharge Pump Tank.

Discharge Pumped via Pipeline to Smith Creek:
The discharge from the OWS and the STP are directed to the Final Discharge Pump Tank. Wastewater from the Final Discharge Pump Tank is pumped via pipeline to Smith Creek.

Diagram of Water Flows Through Mauzy Liberty Site:



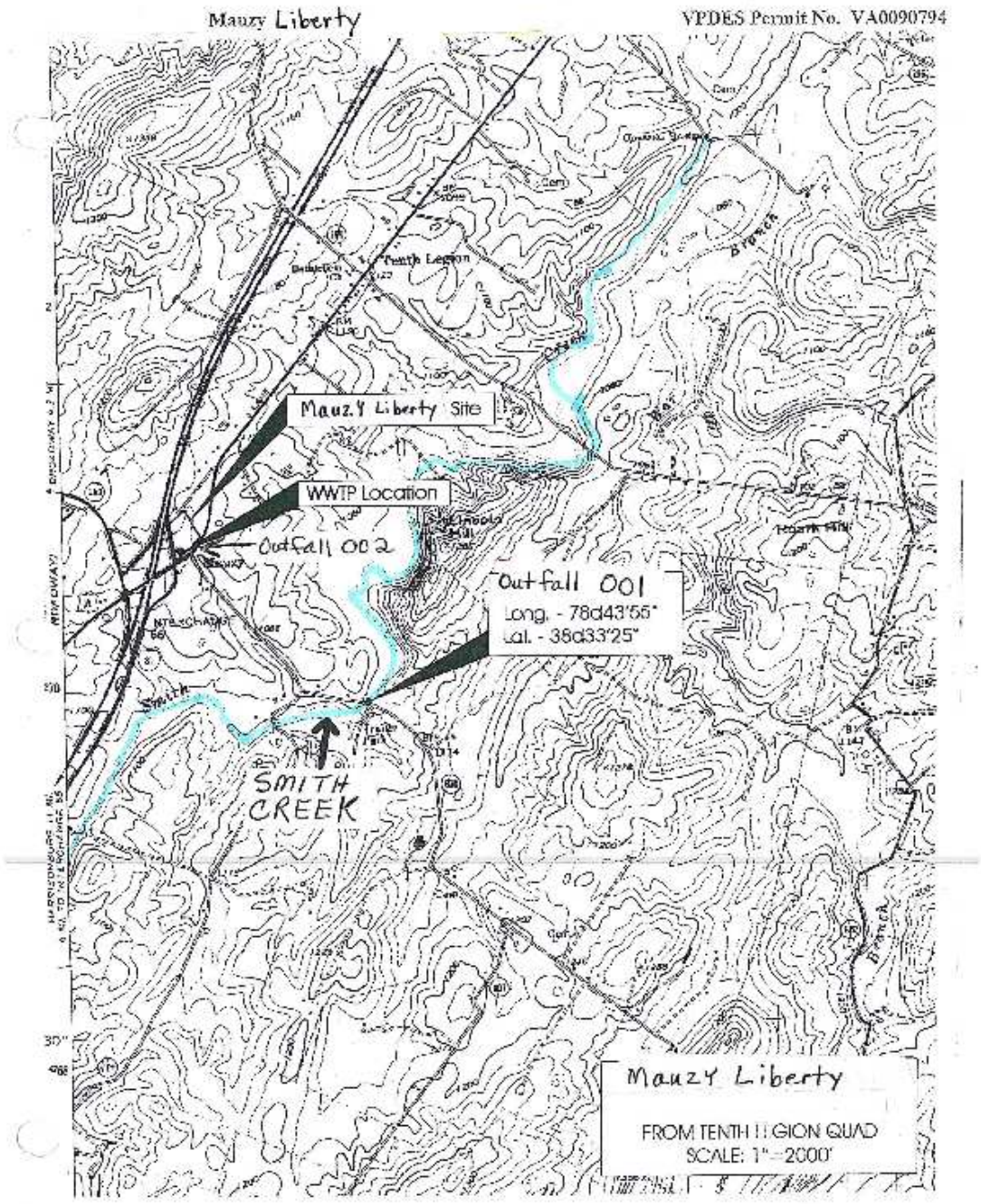
Description of Stormwater Management at Mauzy Liberty, LLC:
Attached is a site map indicating stormwater drainage flow. Stormwater is first directed towards 4 areas with drop inlets which will capture any large trash. Stormwater then flows into an underground Storm Receptor which captures silt and gravel. The Storm Receptor is cleaned out once per quarter. After leaving the Storm Receptor, stormwater goes to an Underground Detention System. The Underground Detention System is a pond with egg crates and #57 stone encased in filter fabric. Stormwater from the underground pond is released slowly through rip rap across Route 11 to a box culvert. From the box culvert stormwater is discharged to a grassy field with no defined channel.



APPENDIX B

DISCHARGE LOCATION AND RECEIVING WATERS INFORMATION

Mauzy Liberty STP discharges to Smith Creek in Rockingham County. The topographical map below shows the location of the treatment facility and Outfalls 001 and 002:



PLANNING INFORMATION

Relevant points of interest within the watershed and in the vicinity of the discharge are shown on the Water Quality Assessments Review table below.

WATER QUALITY ASSESSMENTS REVIEW
POTOMAC-SHENANDOAH RIVER BASIN
7/8/2015

IMPAIRED SEGMENTS

SEGMENT ID	STREAM	SEGMENT START	SEGMENT END	SEGMENT LENGTH	PARAMETER
B47R-01-BEN	Fridley Run	2.39	0.00	2.39	Benthic
B47R-01-PH	Fridley Run	2.39	0.00	2.39	pH
B47R-02-BAC	Mountain Run/Smith Creek/War Branch	5.98, 35.00, 6.81	0.00, 0.00, 6.81	5.98, 35.00, 6.81	E-coli
B47R-03-BEN	Lacey Spring	0.58	0.00	0.58	Benthic
B47R-04-BEN	Mountain Run	5.98	0.00	5.98	Benthic
B47R-05-BEN	Smith Creek	25.19	0.00	25.19	Benthic
B47R-06-BAC	Dry Fork	10.06	0.00	10.06	Fecal Coliform
B47R-07-BEN	Dry Fork	10.06	0.00	10.06	Benthic

PERMITS

PERMIT	FACILITY	STREAM	RIVER MILE	LAT	LONG	WBID
VA0090794	**Mauzy Liberty**	**Smith Creek**	**23.18**	**383325**	**0784355**	**VAV-B47R**
VA0071846	Endless Caverns Inc	Smith Creek	17.24	383606	0784049	VAV-B47R
VA0077399	Lacey Spring Elementary School STP	Smith Creek X Trib	0.19	383225	0784550	VAV-B47R
VA0083305	Camp Overlook	Mountain Run	1.60	382948	0784347	VAV-B47R
VA0088994	Mountain Valley KOA	War Branch	4.45	383208	0784227	VAV-B47R

MONITORING STATIONS

STREAM	NAME	RIVER MILE	RECORD	LAT	LONG
Dry Fork	1BDFK000.76	0.76	5/11/01	38322	0784544
Fridley Run	1BFDY000.02	0.02	6/30/03	382937	0784209
Lacey Springs	1BLAC000.14	0.14	8/8/00	383231	0784545
Linville Creek	1BLNV000.21	0.21	4/23/78	383705	0784755
Linville Creek	1BLNV001.22	1.22	9/1/93	383624	0784813
Mountain Run	1BMTR000.93	0.93	6/30/03	382958	0784422
N.F. Shenandoah River	1BNFS089.81	89.81	2/22/07	383711	0784742
N.F. Shenandoah River	1BNFS090.16	90.16	9/23/99	383717	0784806
Smith Creek	1BSMT018.40	18.4	3/3/70	383518	0784207
Smith Creek	1BSMT019.26	19.26	1/22/09	383518	0784207
Smith Creek	1BSMT023.18	23.1	7/1/91	383326	0784356
Smith Creek	1BSMT025.58	25.58		383221	0784532
Smith Creek	1BSMT025.82	25.82		380313	0791515
Smith Creek	1BSMT023.58	23.58		383218	0784503
Smith Creek	1BSMT026.41	26.41	2/11/09	383218	0784503
Smith Creek	1BSMT028.00	28	5/16/01	383128	0784458
Smith Creek	1BSMT031.69	31.69	5/16/01	382947	0784525
War Branch	1BWAR003.88	3.88	8/3/05	383255	0784211
Dry Fork	1BDFK003.82	3.82	11/17/03	383010	0784809
Dry Fork	1BDFK004.03	4.03	11/17/03	383005	0784819
Linville Creek	1BLNV000.16	0.16	10/2/01	383706	0784744
Linville Creek	1BLNV000.71	0.71	4/25/91	383643	0784802

PUBLIC WATER SUPPLY INTAKES

OWNER	STREAM	RIVER MILE
Town of New Market	Smith Creek	14

WATER QUALITY MANAGEMENT PLANNING REGULATION

Is this discharge addressed in the WQMP regulation? **No**

If Yes, what effluent limitations or restrictions does the WQMP regulation impose on this discharge?

PARAMETER	ALLOCATION

WATERSHED NAME

VAV-B47R Smith Creek

FLOW FREQUENCY DETERMINATION

MEMORANDUM
DEPARTMENT OF ENVIRONMENTAL QUALITY
VALLEY REGIONAL OFFICE

4411 Early Road – P.O. Box 3000 Harrisonburg, VA 22801

SUBJECT: Flow Frequency Determination
Holtzman Express – Mauzy, VPDES Permit No. VA0090794, Rockingham County

TO: Permit Processing File

FROM: Phillip Hurst

DATE: May 1, 2015

This memo supersedes Eric Millard's flow frequency determination dated July 20,2010. The subject facility discharges to Smith Creek at the Mauzy-Athlone Road (SR 608) bridge near Mauzy, Virginia. Stream flow frequencies are required at this site for use by the permit writer in developing effluent limitations for the VPDES permit reissuance.

The flows in Smith Creek in the vicinity of the Holtzman Express outfall are influenced by Lacey Spring, which lies upstream of the gage on Smith Creek and the point where the Holtzman Express discharge enters Smith Creek. The VDEQ measured the flow in the unnamed tributary from the spring once in August 1963, and on several occasions from 1981-1987 and from 1991-1993. The spring flow measurements were compared to the same day daily mean flow values from the continuous record gage on Smith Creek near New Market, Virginia (#01632900). The percentage of flow contributed to Smith Creek by Lacey Spring was determined for each measurement and an average of the percentages was calculated. The average percentage (21%) was then subtracted from the flow frequencies for the reference gage as shown below.

Smith Creek near New Market, VA (#01632900):

Drainage Area = 93.6 mi^2

1Q30 =	4.7 cfs	High Flow 1Q10 =	13 cfs
1Q10 =	6.58 cfs	High Flow 7Q10 =	15 cfs
7Q10 =	7.25 cfs	High Flow 30Q10 =	18 cfs
30Q10 =	8.47 cfs	HM =	31 cfs
30Q5 =	10.5 cfs		

Smith Creek gage, less Lacey Spring flow:

Drainage Area = 93.6 – 0.47 (at mouth) = 93.13 mi^2

1Q30 =	3.71 cfs	High Flow 1Q10 =	10.3 cfs
1Q10 =	5.20 cfs	High Flow 7Q10 =	11.9 cfs
7Q10 =	5.73cfs	High Flow 30Q10 =	14.2 cfs
30Q10 =	6.69 cfs	HM =	24.5 cfs
30Q5 =	8.30 cfs		

The flow frequencies for Smith Creek at the discharge point were determined by using the flows for the gage less the spring flow (as shown above), and then projecting to the discharge point using drainage area proportions. The flow contributed by Lacey Spring was then added back in as shown below.

Smith Creek at discharge point, plus Lacey Spring flow:

Drainage Area = 47.86 mi^2

1Q30 =	2.90 cfs	(1.87 mgd)	High Flow 1Q10 =	8.01 cfs	(5.18 mgd)
1Q10 =	4.05 cfs	(2.62 mgd)	High Flow 7Q10 =	9.24 cfs	(5.97 mgd)
7Q10 =	4.47 cfs	(2.89 mgd)	High Flow 30Q10 =	11.1 cfs	(7.17 mgd)
30Q10 =	5.22 cfs	(3.37 mgd)	HM =	19.1 cfs	(12.3 mgd)
30Q5 =	6.47cfs	(4.18 mgd)			

This analysis does not address any withdrawals, discharges, or other springs lying between the gage and the mouth of the unnamed tributary from Lacey Spring. The high flow months are January through May.

In addition to these flow frequencies, the permit writer has also expressed a need for the flows of War Branch just prior to its confluence with Smith Creek.

Table 1. Percent of Flow Lacey Spring Contributes to Smith Creek

Date	Lacey Spring (cfs)	Smith Creek (cfs)	% of Flow
8/1/1963	6.78	15	42
5/29/1981	4.466	91	4.9
10/26/1983	8.3	41	20
4/18/1984	11.85	304	3.9
10/16/1984	6.812	26	26
4/18/1985	4.31	39	11
9/30/1985	3.12	10	31
4/24/1986	5.928	65	9.1
11/5/1986	1.75	15	12
4/13/1987	8.14	112	7.3
11/9/1987	5.19	28	19
4/4/1991	7.57	128	5.9
10/9/1991	5.33	13	41
4/23/1992	27.9	335	8.3
9/29/1992	10.67	27	40
4/28/1993	26.91	192	14
9/23/1993	12.03	22	55
		Average =	21

EFFLUENT/STREAM MIXING EVALUATION

Mixing zone predictions were made with the Virginia DEQ Mixing Zone Analysis Version 2.1 program. The predictions are based on the discharge and receiving stream characteristics, and are presented below.

Mixing Zone Predictions

Effluent Flow = 0.006 MGD
Stream 7Q10 = 2.89 MGD
Stream 30Q10 = 3.37 MGD
Stream 1Q10 = 2.62 MGD
Stream slope = 0.00231 ft/ft
Stream width = 20 ft
Bottom scale = 2
Channel scale = 1

Mixing Zone Predictions @ 7Q10

Depth = .4433 ft
Length = 1004.98 ft
Velocity = .5056 ft/sec
Residence Time = .023 days

Recommendation: A complete mix assumption is appropriate for this situation and the entire 7Q10 may be used.

Mixing Zone Predictions @ 30Q10

Depth = .4868 ft
Length = 927.1 ft
Velocity = .5367 ft/sec
Residence Time = .02 days

Recommendation: A complete mix assumption is appropriate for this situation and the entire 30Q10 may be used.

Mixing Zone Predictions @ 1Q10

Depth = .4176 ft
Length = 1057.93 ft
Velocity = .4867 ft/sec
Residence Time = .6038 hours

Recommendation: A complete mix assumption is appropriate for this situation and the entire 1Q10 may be used.

Virginia DEQ Mixing Zone Analysis Version 2.1

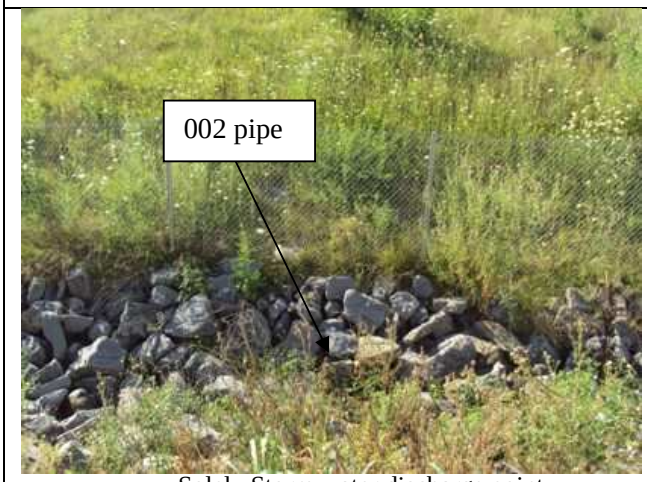
On July 22, 2015, the writer performed a site visit at the subject facility. Mike Baker, Environmental Manager for Mauzy Liberty, was also present.

Outfall 001 to Smith Creek

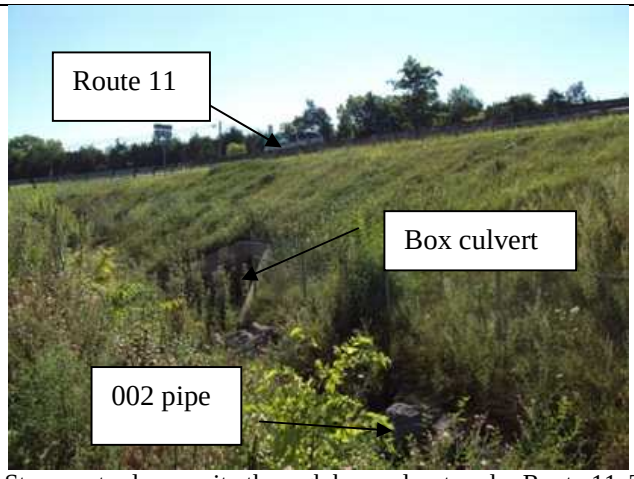
Smith Creek upstream of Outfall 001

Smith Creek at Route 798 bridge at Tenth Legion

Smith Creek at Route 796 bridge downstream of confluence with War Branch



Solely Storm water discharge point



Stormwater leaves site through box culvert under Route 11. There is no receiving stream or drainage ditch. The stormwater is dissipated into the ground.

APPENDIX C

EFFLUENT SCREENING AND EFFLUENT LIMITATIONS

EFFLUENT LIMITATIONS

A comparison of technology and water quality-based limits was performed and the most stringent limits were selected, as summarized in the table below.

Outfall 001 **Final Limits** **Design Flow: 0.006 MGD**

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average		Maximum		Frequency	Sample Type
Flow (MGD)	1	NL		NL		-1/Day	Estimate
---	---	Monthly Average		Weekly Average		---	---
BOD_5	2,3,4	30 mg/L	0.68 kg/d	45 mg/L	1.0 kg/d	1/Month	Grab
TSS	2,6	30 mg/L	0.68 kg/d	45 mg/L	1.0 kg/d	1/Month	Grab
Effluent Chlorine (TRC)(mg/L)*	3,7	0.94		1.2		1/Day	Grab
E. coli (N/100 mL) (geometric mean)	3,6	126		NA		4/Month in any month of each calendar year* or 4/Month ** 10 am to 4 pm	Grab
---	---	Minimum		Maximum		---	---
pH (S.U.)	3	6.5		9.5		1/Day	Grab
Contact Chlorine (TRC)(mg/L)*	3	1.0		NA		1/Day	Grab
TKN (mg/L)	8	NA		NL		1/Year	Grab
Nitrite-N + Nitrate-N (mg/L)	8	NA		NL		1/Year	Grab
Total Nitrogen (mg/L)	8	NA		NL		1/Year	Calculated
Total Phosphorus (mg/L)	8	NA		NL		1/Year	Grab

NL = No Limitation, monitoring required *NA = Not Applicable*

4/Month = 4 samples taken monthly, with at least 1 sample taken each calendar week

4/Month in any month of each calendar year = 4 samples taken, with at least 1 sample taken each calendar week, in any calendar month and reported with the December DMR due January 10th of every year

1/Year = Annual sampling with the results submitted with the DMR due January 10th of each year

* = *Applicable only when chlorination is used for disinfection*

** = *Applicable if an alternative to chlorination is used for disinfection.*

BASIS DESCRIPTIONS

1. *VPDES Permit Regulation (9VAC25-31)*
2. *Federal Effluent Requirements (Secondary Treatment Regulation - 40CFR133)*
3. *Water Quality Standards (9VAC25-260)*
4. *Regional Stream Model*
5. *Best Professional Judgment (BPJ)*
6. *Smith Creek TMDL Report*
7. *Antibacksliding*
8. *Guidance Memo 14-2011, Nutrient Monitoring for "Nonsignificant" Discharges to the Chesapeake Bay Watershed, August 8, 2014*

Outfall 002(Stormwater not exposed to industrial activity) **Final Limits** **Design Flow: NA**

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS		MONITORING REQUIREMENTS	
		Monthly Average	Maximum	Frequency	Sample Type
N/A	See below	There shall be no discharge of process wastewater from this outfall. Also, there shall be no discharge of floating solids or visible foam in other than trace amounts. There are no effluent limitations or monitoring requirements for this outfall.			

BASIS DESCRIPTIONS

VPDES Permit No. VA0090794 was originally issued on April 8, 2002. The issuance of the permit was controversial and a public hearing was held. As a result of concerns raised by the public over the issuance of the permit, the permittee voluntarily accepted SWPPP requirements in the permit. The Clean Water Act § 402(p)(2)(B) requires permits for stormwater discharges associated with industrial activity. Facilities like Mauzy Liberty, LLC are retail fueling facilities and activities at the site are not considered to be associated with industrial activity. In order to address citizen concerns regarding issuance of the permit, the permittee provided letters dated December 19, 2001 and March 8, 2002 describing pollution control measures to address stormwater runoff. A description of the stormwater treatment system that was installed is included in Appendix A.

The Stormwater Management conditions have been included in all of the VPDES permits since the original issuance of the permit. The most current stormwater management conditions from DEQ guidance have been included in the 2015 permit reissuance.

Guidance Memo No. 14-2011 requires nutrient monitoring for solely stormwater outfalls at industrial facilities. Since this facility would not normally be required to obtain coverage under the general permit for stormwater associated with industrial activity, nutrient monitoring has not been required.

LIMITING FACTORS – OVERVIEW:

The following potential limiting factors have been considered in developing this permit and fact sheet:

Water Quality Management Plan Regulation (WQMP) (9VAC25-720)	
A. TMDL limits	E. coli, TSS
B. Non-TMDL WLAs	None
C. CBP (TN & TP) WLAs	None
Federal Effluent Guidelines	BOD_5, TSS, pH
BPJ/Agency Guidance limits	TRC (contact), TN, TP, Nitrite + Nitrate, TKN
Water Quality-based Limits - numeric	BOD_5, DO, TRC (effluent), E. coli, pH, Ammonia-N
Water Quality-based Limits - narrative	None
Technology-based Limits (9VAC25-40-70)	None
Whole Effluent Toxicity (WET)	Not required
Stormwater Limits	None

EVALUATION OF THE EFFLUENT – FEDERAL EFFLUENT GUIDELINES (FEGs):
The Federal Effluent Guidelines for secondary treatment specify the following limits for wastewater treatment plants treating domestic waste:

BOD_5: Monthly Average = 30 mg/L; Maximum Weekly Average = 45 mg/L
$CBOD_5$: Monthly Average = 25 mg/L; Maximum Weekly Average = 40 mg/L
TSS: Monthly Average = 30 mg/L; Maximum Weekly Average = 45 mg/L

EVALUATION OF THE EFFLUENT – CONVENTIONAL POLLUTANTS:
The model for this discharge was updated at this reissuance due to new stream flow and effluent temperature data.

The following values were demonstrated to be protective of downstream WQC.

$CBOD_5$	25 mg/L
TKN	20 mg/L
DO	0 mg/L

Per 40 CFR 133.102, a $CBOD_5$ of 25 mg/L may be considered equivalent to a BOD_5 of 30 mg/L. As such, the permit limits are expressed as BOD_5.

The BOD_5 limits were calculated as follows:

Monthly Average BOD_5 concentration limit: 30 mg/L
Monthly Average BOD_5 loading limit: (30 mg/L)(0.006 MGD)(3.785) = 0.68 kg/d

Maximum Weekly Average BOD_5 concentration limit: 45 mg/L
Maximum Weekly Average BOD_5 loading limit: (45 mg/L)(0.006 MGD)(3.785) = 1.0 kg/d

The BOD_5 limits are identical to the BOD_5 limits in the previous permit.

Per Department guidance, the effluent TKN concentration was modeled at 20 mg/L, which is equivalent to the maximum concentration expected in a sewage treatment plant effluent. TKN limits are not required to ensure the effluent TKN concentration does not exceed 20 mg/L.

pH limits reflecting current WQC for the receiving stream have been carried forward from the previous permit.

TSS limits were developed based on the most stringent of the following:

- FEGs for Secondary Treatment
- Smith Creek TMDL sediment WLA of 820.8 lbs/year based on a TSS maximum weekly average of 45 mg/L and a design flow of 0.006 MGD

  (820.8 lb/year) / (365 days/year) / (0.006 MGD) / 8.345 = 44.9 mg/L

  Kg/d = (mg/L)(0.006 MGD)(3.785)
  Kg/d = (44.9 mg/L)(0.006 MGD)(3.785)
  = 1.0 kg/d

Monthly Average TSS concentration limit = 30 mg/L
Monthly Average TSS loading limit = (30 mg/L)(0.006 MGD)(3.785) = 0.68 kg/d

Maximum Weekly Average TSS concentration limit = 45 mg/L
Maximum Weekly Average TSS loading limit = (45 mg/L)(0.006 MGD)(3.785) = 1.0 kg/d

The maximum weekly average TSS loading limit complies with both the FEGs and the Smith Creek TMDL loading limit.

The TSS limits are identical to the TSS limits in the previous permit.

EVALUATION OF THE EFFLUENT – DISINFECTION:
The Smith Creek TMDL includes an E. coli WLA of 1.04×10^{10} cfu/yr for this facility. Based on the facility's design flow of 0.006 MGD, the WLA corresponds to an E. coli concentration limit of 126 cfu/100 mL. E. coli monitoring is required 4/Month to demonstrate compliance with the concentration limit. When chlorination is utilized minimum contact TRC limits are required. In addition to the minimum TRC contact requirements, E. coli monitoring at a frequency of 4/Month sampling during at least 1 month in each calendar year of the permit term has been imposed to demonstrate compliance with the monthly geometric mean limit and to ensure adequate disinfection. This additional E. coli monitoring has been imposed in accordance with Guidance Memo No. 14-2003.

Due to the presence of the downstream New Market public water supply intake, the receiving stream has "PWS" Special Standards; however, since the intake is located almost 10 miles downstream, and since the design flow is only approximately 0.2% of the receiving stream low (7Q10) flow, standard disinfection requirements have been imposed rather than those suggested for "PWS" waters. By email dated July 9, 2015, VDH concurred with continuation of this approach.

EVALUATION OF THE EFFLUENT – NUTRIENTS:
In accordance with § 62.1-44.19:14.C.5. of the Code of Virginia, TN and TP baselines are being established for this facility to represent nutrient discharge allowances as of July 1, 2005. These baselines will be used as a limiting factor should the facility ever expand to a design flow of 0.040 MGD or greater.) For municipal facilities, the baselines are based on the permitted design capacity of the facility. The permitted design capacity is defined as

Total N or P (lb/yr) = concentration (mg/L) x design flow (MGD) x 8.345 x 365 (days/yr)

where:
Design flow – as of July 1, 2005, the approved flow was 0.006 MGD
Concentration – the treatment provided as of July 1, 2005 was TN = 18.7 mg/L and TP = 2.5 mg/L (assumed concentrations based on secondary treatment facility)

TN = 18.7 mg/l x 0.006 MGD x 8.345 x 365 days/yr = 341.7 lb/yr, round to 342 lb/yr
TP = 2.5 mg/l x 0.006 MGD x 8.345 x 365 days/yr = 45.6 lb/yr, round to 46 lb/yr

The "permitted design capacity" or "permitted capacity" in terms of annual mass load of total nitrogen or total phosphorus discharged by this non-significant discharger is assumed to be that achieved at the current design flow using the currently installed technology.

Nonsignificant dischargers are subject to aggregate wasteload allocations for TN, TP, and Sediment under the TMDL for the Chesapeake Bay. In accordance with Guidance Memo No. 14-2011, monitoring of TN and TP is required for this permit term in order to verify the aggregate WLAs.

EVALUATION OF THE EFFLUENT – TOXICS:

Stream: Water quality data for the receiving stream were obtained from Ambient Monitoring Station No. 1BSMT023.18 on Smith Creek located at the same river mile as the Outfall 001 discharge point. A Flow Frequency Determination for the receiving stream was generated May 1, 2015, and is included in Appendix B. The "Wet Season" or "High Flow" months are January through May.

Stream Information			
90% Annual Temp (°C) =	20.4	90% pH (SU) =	8.4
90% Wet Temp (°C) =	NA	10% pH (SU) =	7.5
Mean Hardness (mg/L) =	230		

All toxic pollutants, including Ammonia-N and TRC, are assumed absent in the receiving stream because there are no data for these parameters directly above the discharge.

Discharge: The pH and temperature values were obtained from the daily operational data submitted by the permittee. Because no hardness data exist for this discharge, the value was set equal to data collected for Smith Creek at the ambient monitoring station.

Effluent Information			
90% Annual Temp (°C) =	29.9	90% pH (SU) =	7.49
90% Wet Temp (°C) =	NA	10% pH (SU) =	6.99
Mean Hardness (mg/L) =	230		

WQC and WLAs were calculated for the WQS parameters for which data are available. The resulting WQC and WLAs are presented in this appendix. Current agency guidelines recommends the evaluation of toxic pollutant limits for TRC and Ammonia-N be based on default effluent concentrations of 20 mg/L and 9 mg/L, respectively. The effluent data were analyzed per the protocol for evaluation of effluent toxic pollutants included in this appendix with the following results:

EVALUATION OF THE EFFLUENT – AMMONIA-N:
No limits were determined to be necessary.

EVALUATION OF THE EFFLUENT – TRC:

Less stringent limits were determined to be necessary at his reissuance; however, in order to comply with antibacksliding requirements, the limits have been carried forward from the previous permit. The following discussion provides some background on this determination.

1. The permit was originally issued on April 8, 2002. The 2002 Fact Sheet stated:

> "Since Fecal Coliform violations and/or benthic impairments do not result in Tier 1 designation, and since there are no chemical specific data to indicate that any other numeric WQS are being violated or only barely met at the discharge point, the stream is designated as Tier 2."

The 2002 permit had the following limits for TRC based on a Tier 2 evaluation:

Monthly Average: 1.15 mg/L
Maximum Weekly Average: 1.41 mg/L

2. The permit was reissued on April 9, 2007. The 2007 Fact Sheet stated:

> "Smith Creek in the immediate vicinity of the discharge is determined to be a Tier 1 waterbody. This finding is based on the fact that the stream is included on the currently approved 303(d) list for not meeting the General Standard (Benthics) for aquatic life use."

The 2007 Fact Sheet, however, followed the same approach as the 2002 permit and determined TRC limits based on a Tier 2 evaluation which resulted in the following TRC limits:

Monthly Average: 0.94 mg/L
Maximum Weekly Average: 1.2 mg/L

The TRC limits were more stringent because the critical flows used in the Flow Frequency Determination decreased.

3. The permit was reissued on April 1, 2012. The 2012 Fact Sheet stated:

> "Smith Creek in the immediate vicinity of the discharge is determined to be a Tier 1 water because the stream does not meet the General Standard for aquatic life use based on a documented benthic impairment."

The 2012 Fact Sheet determined the following TRC limits based on a Tier 1 evaluation rather than a Tier 2 evaluation:

Monthly Average: 3.8 mg/L
Maximum Weekly Average: 4.7 mg/L

Because there was no new information to justify the less stringent TRC limits, the TRC limits from the 2007 permit were carried forward to comply with antibacksliding requirements.

4. Both the acute and chronic WLA for TRC was greater than 4.0 mg/L. When the WLA is greater than 4.0 mg/L, then Stat.exe is run using a WLA of 4.0. The 2015 Fact Sheet determined the following TRC limits based on a Tier 1 evaluation:

Monthly Average: 2.0 mg/L
Maximum Weekly Average: 2.4 mg/L

Because there is no new information to justify the less stringent TRC limits, the TRC limits from the 2007 permit will be carried forward to comply with antibacksliding requirements.

WQC-WLA SPREADSHEET INPUT

WATER QUALITY CRITERIA / WASTE LOAD ALLOCATION ANALYSIS

Facility Name: Mauzy Liberty STP
Receiving Stream: Smith Creek
Permit No.: VA0090794
Date: 7/24/2015
Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information			Stream Flows			Mixing Information			Effluent Information		
Mean Hardness (as CaCO3) =	230	mg/L	1Q10 (Annual) =	2.62	MGD	Annual	- 1Q10 Flow =	100 %	Mean Hardness (as CaCO3) =	230	mg/L
90% Temperature (Annual) =	20.4	deg C	7Q10 (Annual) =	2.89	MGD		- 7Q10 Flow =	100 %	90% Temp (Annual) =	29.9	deg C
90% Temperature (Wet season) =		deg C	30Q10 (Annual) =	3.37	MGD		- 30Q10 Flow =	100 %	90% Temp (Wet season) =		deg C
90% Maximum pH =	8.4	SU	1Q10 (Wet season) =	5.18	MGD	Wet Season	- 1Q10 Flow =	100 %	90% Maximum pH =	7.49	SU
10% Maximum pH =	7.5	SU	30Q10 (Wet season) =	7.17	MGD		- 30Q10 Flow =	100 %	10% Maximum pH =	6.99	SU
Tier Designation =	1		30Q5 =	4.18	MGD				Current Discharge Flow =	0.00600	MGD
Public Water Supply (PWS) Y/N?	Y		Harmonic Mean =	12.3	MGD				Discharge Flow for Limit Analysis	0.00600	MGD
V(alley) or P(iedmont)? =	V										
Trout Present Y/N? =	N										
Early Life Stages Present Y/N? =	Y										

Footnotes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise.
2. All flow values are expressed as Million Gallons per Day (MGD).
3. Discharge volumes are highest monthly average or 2C maximum for Industries and design flows for Municipals.
4. Hardness expressed as mg/l CaCO3. Standards calculated using Hardness values in the range of 25-400 mg/l CaCO3.
5. "Public Water Supply" protects for fish & water consumption. "Other Surface Waters" protects for fish consumption only.
6. Carcinogen "Y" indicates carcinogenic parameter.
7. Ammonia WQSs selected from separate tables, based on pH and temperature.
8. Metals measured as Dissolved, unless specified otherwise.
9. WLA = Waste Load Allocation (based on standards).
10. WLA = Waste Load Allocation (based on standards).
11. WLAs are based on mass balances (less background, if data exist).
12. Acute - 1 hour avg. concentration not to be exceeded more than 1/3 years.
13. Chronic - 4 day avg. concentration (30 day avg. for Ammonia) not to be exceeded more than 1/3 years.
14. Mass balances employ 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, and Harmonic Mean for Carcinogens. Actual flows employed are a function of the mixing analysis and may be less than the actual flows.
15. Effluent Limitations are calculated elsewhere using the minimum WLA and EPA's statistical approach (Technical Support Document).

WQC-WLA SPREADSHEET OUTPUT

Facility Name: Mauzy Liberty STP
Permit No.: VA0090794
Receiving Stream: Smith Creek
Date: 9/1/2015

WATER QUALITY CRITERIA
0.006 MGD Discharge Flow - Mix per "Mixer"

Toxic Parameter and Form	Carcinogen?	Aquatic Protection Acute		Aquatic Protection Chronic		Human Health Public Water Supplies	Human Health Other Surface Waters
Ammonia-N (Annual)	N	3.9E+00	mg/L	8.9E-01	mg/L	None	None
Chlorine, Total Residual	N	1.9E-02	mg/L	1.1E-02	mg/L	None	None

NON-ANTIDEGRADATION WASTE LOAD ALLOCATIONS
0.006 MGD Discharge - Mix per "Mixer"

Toxic Parameter and Form	Aquatic Protection Acute		Aquatic Protection Chronic		Human Health
Ammonia-N (Annual)	1.7E+03	mg/L	5.0E+02	mg/L	N/A
Chlorine, Total Residual	8.3E+00	mg/L	5.3E+00	mg/L	N/A

PROTOCOL FOR THE EVALUATION OF THE EFFLUENT – TOXIC POLLUTANTS

Toxic pollutants were evaluated in accordance with OWP Guidance Memo No. 00-2011. According to this guidance, STPs with a design flow ≤ 0.040 MGD are treated as if there are no toxic pollutants in their discharge unless there is actual evidence to indicate otherwise. This applies to all toxic pollutants with the exception of Ammonia and Total Residual Chlorine, which are evaluated in every STP discharge. Also, these smaller STPs are not required to monitor for any toxic pollutants unless there is reason to believe that such pollutants may be present.

Acute and Chronic WLAs (WLA_a and WLA_c) were analyzed according to the protocol below using a statistical approach (STAT.exe) to determine the necessity and magnitude of limits. Human Health WLAs (WLA_{hh}) were analyzed according to the same protocol through a simple comparison with the effluent data. If the WLA_{hh} exceeded the effluent datum or data mean, no limits were required. If the effluent datum or data mean exceeded the WLA_{hh}, the WLA_{hh} was imposed as the limit.

Since there are no data available for any toxic pollutants immediately upstream of this discharge, all upstream background pollutant concentrations are assumed to be "0".

The steps used in evaluating available effluent data from STPs with design flows ≤ 0.040 MGD are as follows:

A. If all data are reported as "below detection" or < the required Quantification Level (QL) (or, for metals, in a form other than "dissolved"), then the data are not suitable for analysis and no further monitoring is required.

B. If any data value is reported as detectable at or above the required QL, then the data are adequate to determine whether effluent limits are needed.

B.1. If the evaluation indicates that no limits are needed, then no further monitoring is required.

B.2. If the evaluation indicates that limits are needed, then the limits and associated requirements are specified in the draft permit.

Parameter	CASRN	QL	Data	Source of Data	Data Eval
Ammonia-N (mg/L) (Annual)	766-41-7	0.2 mg/L	**Default = 9 mg/L**	**a**	**B.1**
TRC (mg/L)	7782-50-5	0.1 mg/L	**Default = 20 mg/L**	**a**	**B.2**

CASRN = Chemical Abstract Service Registry Number for each parameter is referenced in the current Water Quality Standards. A unique numeric identifier designating only one substance. The Chemical Abstract Service is a division of the American Chemical Society.

"Source of Data" codes:
a = default effluent concentration

"Data Evaluation" codes:
See section titled PROTOCOL FOR THE EVALUATION OF EFFLUENT TOXIC POLLUTANTS for an explanation of the code used.

STAT.EXE RESULTS:

Ammonia-N (Annual)	**TRC**
Chemical = Ammonia - Annual Chronic averaging period = 30 WLAa = 1700 WLAc = 500 Q.L. = 0.2 # samples/mo. = 1 # samples/wk. = 1 Summary of Statistics: # observations = 1 Expected Value = 9 Variance = 29.16 C.V. = 0.6 97th percentile daily values = 21.9007 97th percentile 4 day average = 14.9741 97th percentile 30 day average= 10.8544 # < Q.L. = 0 Model used = BPJ Assumptions, type 2 data No Limit is required for this material The data are: 9	Chronic averaging period = 4 WLAa = 4 * WLAc = 4 * Q.L. = 0.1 # samples/mo. = 30 # samples/wk. = 7 Summary of Statistics: # observations = 1 Expected Value = 20 Variance = 144 C.V. = 0.6 97th percentile daily values = 48.6683 97th percentile 4 day average = 33.2758 97th percentile 30 day average= 24.1210 # < Q.L. = 0 Model used = BPJ Assumptions, type 2 data A limit is needed based on Acute Toxicity Maximum Daily Limit = 4 Average Weekly Limit = 2.44282882700811 Average Monthly Limit = 1.98248465547072 The data are: 20 * A WLA of 4.0 mg/L is used for Stat.exe when the WLA calculated is › 4 mg/L.

APPENDIX D

BASES FOR PERMIT SPECIAL CONDITIONS

Tabulated below are the sections of the permit, with any changes and the reasons for the changes identified. Also provided is the basis for each of the permit special conditions.

Cover Page

- Content and format as prescribed by the Guidance Memo No. 14-2003.
- The owner name was changed from Holtzman Family, L.P. to Mauzy Liberty, LLC.
- The facility name was changed from Mauzy Liberty to Mauzy Liberty STP.
- Outfall 002 was added.

Part I.A.1 **Effluent Limitations and Monitoring Requirements – Outfall 001(final discharge from sewage treatment plant prior to combination with discharge from oil water separator):** Bases for effluent limits are provided in previous pages of this fact sheet. Monitoring requirements are as prescribed by Guidance Memo No. 14-2003

Updates Part I.A.1 of the previous permit with the following:

- Minor changes were made to the format and introductory language.
- Annual monitoring for TP, TKN, Nitrite-N + Nitrate-N, and TN was added per Guidance Memo No. 14-2011.
- The sampling frequency for E. coli was changed from 4/Month 10 a.m. to 4 p.m. to 4/Month in any month each calendar year.
- A footnote referring to Part I.B alternative disinfection requirements was added.
- A footnote that TN was the sum of TKN and Nitrite-N + Nitrate-N was added.

Part I.A.2 **Effluent Limitations and Monitoring Requirements – Outfall 002 (stormwater not exposed to industrial activity):** *New requirement*.

Part I.B **Total Residual Chlorine (TRC) Limitations and Monitoring Requirements:** *Updates Part I.B of the previous permit. Additional language regarding the number of exceptions when the TRC concentration after the CCT was less than 0.6 mg/L was deleted.* Specifies both disinfection and effluent limits and monitoring requirements should the permittee elect to switch from alternate disinfection to chlorine disinfection. Required by Sewage Collection and Treatment (SCAT) Regulations and 9VAC25-260-170, Bacteria; other waters. Also, 40 CFR 122.41(e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment in order to comply with the permit. This ensures proper operation of chlorination equipment to maintain adequate disinfection.

Part I.C **Effluent Limitations and Monitoring Requirements – Additional Instructions***: Updates Part I.C of the previous permit with minor wording changes. Also, the QL for BOD_5 was changed from 5 mg/L to 2 mg/L. A paragraph was added regarding nutrient reporting*. Authorized by VPDES Permit Regulation 9 VAC25-31-190 J.4 and 220.I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.
§62.1 44.19:13 of the Code of Virginia defines how annual nutrient loads are to be calculated; this is carried forward in 9VAC25-820-70. As annual concentrations (as opposed to loads) are limited in the individual permit, this special condition is intended to reconcile the reporting calculations between the permit programs, as the permittee is collecting a single set of samples for the purpose of ascertaining compliance with two permits.

Part I.D.1 **95% Capacity Reopener:** *Updates Part I.D.1 of the previous permit with minor wording changes*. Required by VPDES Permit Regulation 9VAC25-31-200 B 4 for Publicly Owned Treatment Works (POTW) and Privately Owned Treatment Works (PVOTW) permits.

Part I.D.2 **Indirect Dischargers:** *New requirement.* Required by VPDES Permit Regulation 9VAC25-31-200.B.1 and B.2 for Publicly Owned Treatment Works (POTW) and Privately Owned Treatment Works (PVOTW) that receive waste from someone other than the owner of the treatment works.

Part I.D.3 **Materials Handling/Storage:** *Updates Part I.D.2 of the previous permit with minor wording changes***.** 9VAC25-31-50.A prohibits the discharge of any waste into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorizes the Board to regulate the discharge of industrial waste or other waste.

Part I.D.4 **O&M Manual Requirement:** *Updates Part I.D.3 of the previous permit with changes to what is required to be included in the O&M Manual.* Required by Code of Virginia Section 62.1-44.19, Sewage Collection and Treatment (SCAT) Regulations 9VAC25-790, and VPDES Permit Regulation 9VAC25-31-190.E for all STPs.

Part I.D.5 **CTC/CTO Requirement:** *Identical to Part I.D.4 of the previous permit.* Required by Code of Virginia 62.1-44.19, Sewage Collection and Treatment (SCAT) Regulations 9VAC25-790, and VPDES Permit Regulation 9VAC25-31-190.E for all STPs. 9VAC25-40-70.A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade.

Part I.D.6 **SMP Requirement:** *Identical to Part I.D.5 of the previous permit.* VPDES Permit Regulation 9VAC25-31-100.Q, 220.B.2, and 420 through 720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on their sludge use and disposal practices and to meet specified standards for sludge use and disposal. Technical requirements are derived from the Virginia Pollution Abatement Permit Regulation (9VAC25-32-10 *et seq.*)

Part I.D.7 **Reliability Class:** *Identical to Part I.D.6 of the previous permit.* Required by Sewage Collection and Treatment (SCAT) Regulations 9VAC25-790 for all municipal facilities. Class II status recommended by VDH for this facility on 4/8/2002.

Part I.D.8 **Treatment Works Closure Plan**. *Updates Part I.D.7 of the previous permit with minor wording changes*. This condition establishes the requirement to submit a closure plan for the treatment works if the treatment facility is being replaced or is expected to close. This is necessary to ensure industrial sites and treatment works are properly closed so that the risk of untreated waste water discharge, spills, leaks and exposure to raw materials is eliminated and water quality maintained. Section 62.1-44.21 requires every owner to furnish when requested plans, specification, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law.

Part I.D.9 **Reopeners:**

a. *Identical to Part I.D.8.a of the previous permit.* Section 303(d) of the Clean Water Act requires that total maximum daily loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The reopener recognizes that, according to section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act.

b. *Updates Part I.D.8.b of the previous permit with minor wording changes:* 9VAC25-31-390.A authorizes DEQ to modify VPDES permits to promulgate amended water quality standards.

c. *Identical to Part I.D.8.c of the previous permit:* Required by the VPDES Permit Regulation 9VAC25-31-220.C, for all permits issued to treatment works treating domestic sewage.

Part I.E. **Stormwater Management:** *Updates Part I.E of the previous permit.* The Pollution Prevention Plan requirements are derived from the VPDES general permit for discharges of stormwater associated with industrial activity, 9VAC25-151-10 et seq.

Part II **Conditions Applicable to All VPDES Permits:** *Updates Part II of the previous permit.* VPDES Permit Regulation 9VAC25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.

Deletions: None